

What Is Claimed Is:

Sub
B1

1. In an adaptive speed control system for a vehicle, a method for controlling vehicle deceleration, the method comprising:
determining a speed of the vehicle; and
setting a maximum allowed vehicle deceleration based on the vehicle speed determined.

2. The method of claim 1 wherein setting a maximum allowed vehicle deceleration based on the vehicle speed includes adjusting the maximum allowed vehicle deceleration in an inverse relationship to the vehicle speed.

Sub
A1

3. The method of claim 2 wherein adjusting the maximum allowed vehicle deceleration comprises decreasing the maximum allowed vehicle deceleration as the vehicle speed increases.

4. The method of claim 2 wherein adjusting the maximum allowed vehicle deceleration comprises increasing the maximum allowed vehicle deceleration as the vehicle speed decreases.

5. The method of claim 2 wherein the maximum allowed vehicle deceleration is capable of varying continuously.

Sub B2

1 6. The method of claim 5 wherein the
2 maximum allowed vehicle deceleration is capable of
3 varying in a range between about 0.2 g and about
4 0.3 g.

Sub B2

1 7. The method of claim 2 wherein the
2 maximum allowed vehicle deceleration is an exponential
3 function of the vehicle speed.

5

1 6.8. The method of claim 7 wherein the
2 maximum allowed vehicle deceleration is defined by the
3 equation:

4
$$\text{MAXDECEL} = 0.2 + 160/(\text{VEHSPD} + 40)^2,$$

5 where MAXDECEL is the maximum allowed vehicle
6 deceleration, and VEHSPD is the vehicle speed.

Sub B3

1 9. In an adaptive speed control system for
2 a vehicle, a system for controlling vehicle
3 deceleration, the system comprising:

4 a receiver capable of receiving an input
5 signal indicative of a speed of the vehicle; and

6 a controller capable of setting a maximum
7 allowed vehicle deceleration based on the vehicle
8 speed.

1 10. The system of claim 9 wherein, to set a
2 maximum allowed vehicle deceleration based on the

3 vehicle speed, the controller is capable of adjusting
4 the maximum allowed vehicle deceleration in an inverse
5 relationship to the vehicle speed.

1 11. The system of claim 10 wherein, to
2 adjust the maximum allowed vehicle deceleration, the
3 controller is capable of decreasing the maximum
4 allowed vehicle deceleration as the vehicle speed
5 increases.

1 12. The system of claim 10 wherein, to
2 adjust the maximum allowed vehicle deceleration, the
3 controller is capable of increasing the maximum
4 allowed vehicle deceleration as the vehicle speed
5 decreases.

1 13. The system of claim 10 wherein the
2 maximum allowed vehicle deceleration is capable of
3 varying continuously.

1 14. The system of claim 13 wherein the
2 maximum allowed vehicle deceleration is capable of
3 varying in a range between about 0.2 g and about
4 0.3 g.

1 15. The system of claim 10 wherein the
2 maximum allowed vehicle deceleration is an exponential
3 function of the vehicle speed.

